

BID SOLICITATION NOTICE

TO RECEIVE A BID PACKAGE, BIDDERS MAY EITHER DOWNLOAD THE REQUEST FOR BID ("RFB") FROM THE AUTHORITY'S WEBSITE AT <http://www.state.nj.us/turnpike/purchasing.html> OR REQUEST A BID BY COMPLETING THIS FORM AND FAXING IT TO THE NUMBER STATED BELOW. FOR RECORD KEEPING PURPOSES, THE AUTHORITY REQUESTS THAT THE BIDDER COMPLETE THIS FORM AND RETURN IT TO THE PROCUREMENT AND MATERIALS MANAGEMENT DEPARTMENT, EVEN WHEN A BIDDER IS DOWNLOADING THE RFB. THIS IS THE ONLY NOTICE OF BIDDING FOR THE FOLLOWING GOODS.

THE NEW JERSEY TURNPIKE AUTHORITY PROCUREMENT AND MATERIALS MANAGEMENT DEPARTMENT

New Jersey Turnpike Administrative Offices
P.O. Box 5042
581 Main Street
Woodbridge, New Jersey 07095-5042
Tel. - 732-750-5300 Ext. 8640 Fax - 732-750-5399

TITLE: **CONCRETE AND MORTAR MIX SUPPLIES**

BID NO: **RM-110304**

DUE DATE: **9-9-14**

TIME: **2:30 PM**

SUBMIT BIDS BEFORE THE DUE DATE AND TIME STATED ABOVE TO THE ABOVE ADDRESS

BIDDER INFORMATION (PLEASE PRINT)

NAME OF BIDDING ENTITY

ADDRESS

CITY, STATE AND ZIP CODE

E-MAIL ADDRESS

REPRESENTATIVE TO CONTACT-NAME & TITLE

TELEPHONE NO.

FEDERAL TAX I.D. NO. or TAXPAYER I.D. NO.

FAX NO

☐ **WE HAVE DOWNLOADED THE BID FROM THE AUTHORITY WEBSITE**

THE NEW JERSEY TURNPIKE AUTHORITY
PROCUREMENT AND MATERIALS MANAGEMENT DEPARTMENT

New Jersey Turnpike Administrative Offices

P.O. Box 5042

581 Main Street

Woodbridge, New Jersey 07095-5042

Tel. - 732-750-5300 Fax - 732-750-5399

REQUEST FOR BID

TITLE: **CONCRETE AND MORTAR MIX SUPPLIES**

BID NO: **RM-110304**

DUE DATE: **9-9-14**

TIME: **2:30 PM**

SUBMIT BIDS BEFORE THE DUE DATE AND TIME STATED ABOVE TO THE ABOVE ADDRESS

BIDDER INFORMATION
(TO BE COMPLETED BY THE BIDDER)

Please Print

NAME OF BIDDING ENTITY

ADDRESS

CITY, STATE AND ZIP CODE

E-MAIL ADDRESS

REPRESENTATIVE TO CONTACT-NAME & TITLE

TELEPHONE NO.

FEDERAL TAX I.D. NO. or TAXPAYER I.D. NO.

FAX NO

BUSINESS CORPORATION _____ PARTNERSHIP _____ INDIVIDUAL

OTHER (SPECIFY) _____

SECTION I

A. INTRODUCTION

The New Jersey Turnpike Authority (the “Authority”) was created by an act of the New Jersey Legislature in 1948, known as the New Jersey Turnpike Authority Act (as amended and supplemented, “Act”). The Act authorizes the Authority to construct, maintain, repair, and operate the New Jersey Turnpike, to collect tolls, and to issue Turnpike Revenue Bonds or Notes, subject to the approval of the Governor, payable from tolls and other revenues of the Authority. On May 27, 2003, the Act was amended to empower the Turnpike to assume all powers, rights, obligations and duties of the New Jersey Highway Authority (the “Highway Authority”), which owned and operated the Garden State Parkway and PNC Bank Arts Center. On July 9, 2003, the Authority assumed all powers, rights, obligations and duties of the Highway Authority. The Authority currently operates both the Garden State Parkway (“GSP”) and the New Jersey Turnpike (“Turnpike”) (both roads are collectively referred to herein as the (“Roadways”).

The Authority is governed by an eight member Board of Commissioners (“Board”). The Governor of New Jersey appoints each of its members and has the statutory authority to overturn an action of the Board by vetoing any Board action within 10 days of receiving the minutes of the meeting. The Board authorizes awards of all public contracts over \$35,000, except in cases where it has delegated authority to the Executive Director.

This bid solicitation is being conducted pursuant to the Authority’s enabling statute as found in N.J.S.A. 27.23-6.1 and Executive Order number 37 (Corzine 2006) and the regulations and policies of the Authority with regard to public bid procurement.

B. BIDDER GUIDELINES/CHECKLIST

BIDS THAT FAIL TO CONFORM TO THE FOLLOWING REQUIREMENTS MAY BE REJECTED:

1. The Request of Bid ("RFB"), including specifications and related bid documents ("Bids") must be received at or before the due date and time stated on the cover page at the following place: New Jersey Turnpike Authority, Administration Building, 581 Main Street, Woodbridge, New Jersey 07095. Late Bids will be returned unopened. Telephone or facsimile Bids will not be accepted.
2. The entity submitting a Bid ("Bidder") must provide one original and one copy of the Bid. The Bid must include all price information. Bid prices shall include delivery of all items F.O.B. destination or as otherwise provided. Price quotes must be firm through issuance of contract.
3. All Bid prices must be typed or written in ink. Quote the specified unit of measure. If bidding an alternate, provide detailed specifications.
4. All corrections, white-outs, erasures, re-striking of type, or other forms of alteration or the appearance of alteration, to unit and/or total prices must be initialed in ink by the Bidder.
5. The Bidder must attend the mandatory site inspection at the following date(s) and time(s) if applicable:
6. If checked this RFB requires the following mandatory document(s) or the Bid **will** be rejected:
 - (a) Bid Bond or Cashier's Check for 10% of the amount Bid or a Letter of Surety ☒
 - (b) Stockholder/Partnership Disclosure Statement ☒
7. See the Authority's Instruction to Bidders for a complete list of the Authority's standard contract Terms and Conditions, as well as required forms that must be included with the Bid (**SEE ATTACHED**).

The following checked documents are required for this Bid. Failure to submit the required forms may result in the rejection of the Bid.

- (a) State of New Jersey Division of Revenue Business Registration Certificate ☒
- (b) Certification of Registration with the Secretary of State (only if non-NJ corporation) ☒
- (c) Acknowledgement of requirement for Disclosure of Political Contributions (ELEC) ☒
- (d) Public Works Contractor Registration Certificate(s) (if applicable) ☐
- (e) Affirmative Action Information Sheet with Certificate or Form AA302 ☒
- (f) Signed Mandatory Equal Employment Opportunity Language ☒
- (g) SBE/WBE/MBE Certificates and Form ☒
- (h) Vendor Disclosure Form (EO129-Location of Services) ☒
- (i) Notice of Set-Off for State Tax (P.L. 1999, c 159) ☒
- (j) Automobile Insurance Liability Waiver ☐
- (k) Insurance Certificate ☒
- (l) Disclosure of Investment in Iran ☒

8. Bidder must sign Bid

SECTION II

A. INTENTION

1. Sealed Bids for **RM-110304** must be received at the New Jersey Turnpike Authority Administrative Offices, 581 Main Street, Woodbridge, New Jersey 07095-5042, by the due date and time stated on the cover page of this “RFB” at which time and place said Bid will be opened and read in public.
2. Bidders mailing Bids should allow for their normal mail delivery time to ensure timely receipt of the Public Bids. **Please be advised that using an overnight/next-day delivery service does not guarantee overnight/next-day deliveries to our location. The Authority will not be responsible for any Bid not being received by the required date and time.**
3. It is the intention of the Authority to issue a purchase order or notice of award for a price agreement for the procurement of **CONCRETE AND MORTAR MIX SUPPLIES**.
4. Items purchased under this contract will be delivered as directed by the Authority.
5. The term of the contract shall be for “one year with the option to extend for two additional one-year terms at the Authority’s discretion and the vendor’s concurrence”.
6. Please contact **CHRISTINE NOBLE** with any questions regarding this procurement contract at noble@turnpike.state.nj.us or **732-750-5300 EXT. 8623**.

B. BID SHEET INSTRUCTIONS

1. Bidders must follow all instructions in this RFB and in the Instructions to Bidders issued by the Authority, and any other documents issued by the Authority in connection with this RFB (collectively, “Bid Documents”).
2. Bidders must examine the bid documents carefully before bidding and must ask the Director of Procurement and Materials Management Department (“PMM”) in writing for any interpretation or correction of any apparent ambiguity, inconsistency or apparent error therein. If necessary, an interpretation or correction to the specifications shall be issued by the Director of PMM in response to inquiries and/or addendum shall be faxed to Bidders who have obtained the Bid Documents. Upon the issuing of an addendum, the addendum shall become part of the bid documents. **Requests for interpretation or correction shall be considered only if received at least 5 business days prior to the Bid opening date.** Written requests can be submitted by Email or Fax at 732-750-5399.
3. The submission of the Bid is conclusive evidence that the Bidder is fully aware of the conditions, requirements, and details as stated in the Bid Documents. If the Bidder, prior to submitting its Bid, fails to notify the Director of PMM of the existence of an ambiguity or inconsistency in the Bid Documents, a Bid will conclusively be presumed to have been based upon the Authority’s interpretation of such ambiguity or inconsistency.
4. All erasures, interpolations or other physical changes on the Bid form shall be signed or initialed by the Bidder. Bids containing any conditions, omissions, erasure’s, alterations, or items not called for in this “RFB” or irregularities of any kind, may be rejected by the Authority, in its sole discretion.

The Bidder shall not attach conditions, limitations or provisos to their Bid, except in cases where “exceptions” are permitted.

5. **The Authority will accept Approved Equivalent items on this Bid.** If a Bidder is basing the proposal on items other than what is specified, and wishes the items proposed to be considered as an "Approved Equivalent", the Bidder shall enter a price on the Bid sheet then submit on the Exception Sheet in the exact format of the line item on the RFB contained herein, the item number, an item description including manufacturers name, model number, informational brochure(s), and packaging quantities of those items that the Bidder proposes to substitute.

C. BASIS OF AWARD

1. **Bidders must supply a price for every item listed. Bids not having a price for all listed items may be rejected.**
2. **Bidders must quote only one price per line item. If a Bidder quotes multiple prices per line item, the Bid may be rejected.**
3. The Authority will purchase amounts of any given item as needed, at the sole discretion of the Authority and shall not be bound by any quantities listed. The Authority reserves the right to make reasonable increases to line item quantities.
4. All items are to be Bid FOB Destination. All shipping, handling, and other costs should be considered in the Bid price.
5. The Authority is tax exempt from New Jersey Sales and Excise Tax.
6. Award will be made to the lowest responsive Bidder for the total line items Bid.

D. MISCELLANEOUS

1. Delivery Date _____
(Insert if applicable)
2. Payment Terms: The Authority's standard payment terms are Net 30 days. Prompt payment discounts may be offered and must be a minimum of 10 days.

Discount: Maximum time period _____
 Percentage _____
Note: Although prompt payment discounts will not be considered in determining low Bid, the Authority reserves the right to take advantage of any such discounts offered.
3. The successful bidder will be required to provide a contract bond if stated in the specifications and (if awarded) **0% of contract amount.**

BID QUOTATION SHEET

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL DOLLAR AMOUNT
1.	2000	BAG	MORTAR MIX RAPID SET 55 LB. BAGS (50 BAGS PER PALLET) PER ATTACHED SPECIFICATIONS NJTA # 130537	\$	\$
2.	6000	BAG	CONCRETE MIX RAPID SET 60 LB. BAGS (50 BAGS PER PALLET) PER ATTACHED SPECIFICATIONS NJTA # 131885	\$	\$
3.	1500	PACK	RAPID SET ACCELERATOR (50 PACKS PER BAG) 2.8 OZ. BAGS (10 BAGS PER PALLET) PER ATTACHED SPECIFICATIONS NJTA # 135527	\$	\$
4.	2500	PACK	RAPID SET ADDITIVE (50 PACKS PER BAG) 2.8 OZ. BAGS (10 BAGS PER PALLET) PER ATTACHED SPECIFICATIONS NJTA # 135528	\$	\$
TOTAL OF LINES 1 THROUGH 4					\$

ITEM #5 IS REQUIRED FOR THIS QUOTATION BUT WILL NOT BE BASIS FOR AWARD. FAILURE TO PROVIDE QUOTATION FOR ITEM # 5 MAY RESULT IN REJECTION OF THE BID.

5.	<p>_____ % Discount off Manufacturer's List Price. The discount given will be applied to all other items purchased by the Authority under this contract. This item does not figure in the award of the bid unless there is a tie among bidders; then the bidder giving the highest discount will be awarded contract. The above quoted discounts shall apply to all items and shall remain firm for the entire contract period.</p>
----	---

ANY INQUIRIES CONCERNING THIS BID MUST BE SENT VIA FAX TO 732-750-5399 NO LATER THAN FIVE (5) BUSINESS DAYS BEFORE BID OPENING

NEW JERSEY TURNPIKE AUTHORITY

Andrea E. Ward
Director, PMM Department

_____/_____
Name of Company / Authorized Signature of Bidder

E. SIGNATURE PAGE

1. **ADDENDA / INQUIRIES:** COMPLETE (if applicable) BEFORE SUBMITTING BID:

Receipt of Addendum / Inquiries # _____ dated _____ is hereby acknowledged.

Receipt of Addendum / Inquiries # _____ dated _____ is hereby acknowledged.

☐

CHECK BOX IF NO ADDENDA/INQUIRY ISSUED

(All Addenda / Inquiries must be acknowledged as indicated above.)

2. **BID IRREVOCABLE:** This offer shall be irrevocable for ninety (90) working days after the date on which the Authority publicly opens this Bid except in those instances where an unsuccessful Bidder has filed a bid protest pursuant to N.J.A.C. 19:9-2.12. Upon notification of a protest, Bidders are required to hold their prices for an additional 90 days. All Bidders will be notified in writing of the action taken by the Authority.
3. **OFFER/CERTIFICATION:** The undersigned offers and agrees to furnish to the New Jersey Turnpike Authority the services and/or materials in compliance with all terms, conditions, specifications and addenda of the RFB, Bid Documents, and resulting contract. The undersigned further certifies understanding and compliance with the requirements of the standard terms and conditions as stated in the Instructions to Bidders included with the Bid Documents. The undersigned certifies that he or she executes this Bid with full authority so to do; and that all statements contained in this Bid and in this certification are true and correct, and made with full knowledge that the Authority relies upon the truth of the statements contained herein and in any statements requested by the Authority showing evidence of qualifications in awarding the contract.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

4. **AUTHORIZED SIGNATURE:** _____

Print Name and Title: _____

Bidder: _____

Address: _____

City, State, Zip: _____

E-mail address _____

Telephone #: _____ Fax: _____

Date: # _____

SECTION III

NO RESPONSE BID SURVEY

BID REQUISITION NUMBER: RM-110304

PROPOSAL TITLE: CONCRETE AND MOTAR MIX SUPPLIES

If you do not choose to respond to this Bid, please complete the form below:

Name of Company_____

Reason you did not respond (Check all that apply)

- _____ Cannot supply product or service
- _____ Cannot meet technical specifications
- _____ Cannot meet delivery specifications
- _____ Cannot meet legal requirements
(i.e. Bid/performance/security/insurance, etc.)
- _____ Cannot provide a competitive price at this time
- _____ Interested in receiving specifications for informational purposes only
- _____ Insufficient lead time to respond
- _____ Other:(please be specific) _____

Do you wish to remain on our mailing list?

_____Yes _____No

Additional comments: _____

Signed :(optional)_____

Company:_____

New Jersey Turnpike Authority
SPECIFICATION FOR QUICK SETTING CONCRETE MIX
AND FOR MORTAR MIX PATCHING MATERIALS

1.0 General Requirements

1.1 Intent:

This document is for establishing sources for the purpose of furnishing Quick Setting Patch Materials – Concrete Mix and /or Mortar Mix – to the New Jersey Turnpike Authority (“Authority”, Parkway and Turnpike Division) in accordance with the following terms and conditions.

1.2 Contract Period:

The term of the contract shall be for one year with the option to extend for two additional one-year terms at the Authority’s discretion and Vendor’s concurrence.

1.3 Prices:

All prices must remain as quoted and shall not be subject to increase for the duration of the contract.

1.4 Estimated Amount:

This is a requirement contract. Quantities listed herein are estimated quantities and the Authority shall not be bound to any minimum nor maximum amount. Actual quantities will be determined by unforeseen maintenance needs of the division. No adjustments in unit prices will be allowed for variations of any magnitude from the estimated prices.

1.5 Facilities

The contractor must have adequate facilities for the handling, storing, and billing of the materials. All facilities are subject to inspection and approval of the authority. As the need arises for the materials, due notice will be given the supplier by the authority

1.6 Delivery Date:

In the event deliveries are not received within 10 days of notification to ship, the Executive Director or the Authority or his delegate may authorize the using division to secure the full amount of the requested delivery from any available source, with any increased difference in price between such source and the contractors price, to be paid by the defaulting contractor from and moneys due him. If there are no money due, the increased difference shall be paid directly by the defaulting contractor.

1.7 Cost:

The prices for each item are F.O.B. destination.

The F.O.B destination price includes the complete cost without any additional charge for transportation to the specific location and includes all necessary labor, loading and unloading costs, and required shipping provisions to insure compliance with all laws, rules and regulations of the Department of Motor Vehicles.

1.8 Inquiries Regarding Project:

1.8.1 Prior to award:

Ed Sekelsky
New Jersey Turnpike Authority
PO Box 335
Hightstown, New Jersey 08520

After Award; all inquiries must be in writing to the following locations below. The locations below are various delivery locations.

1.8.2 TURNPIKE

MAINTENANCE BUILDING
INTERCHANGE 8 & Rt. 33
HIGHTSTOWN, NJ 08520

1.8.3 PARKWAY

YARD 4 (TELEGRAPH HILL)
TELEGRAPH HILL
CRAWFORDS CORNER/EVERETT ROAD
HOLMDEL, NJ 07733 (MP 116 SB AND NB) (87.5 – 116.0)

2.0 Control of Material

2.1 Source of Supply and Quality Requirements:

Materials will not be permitted from firms and individuals included in the report of suspensions, disbarments and disqualification of firms and individuals as maintained by the Department of the Treasury, Division of Building and Construction, Bureau of Contractor Qualifications (Telephone: 609-292-5022).

2.2 Materials, Inspections, Test, and Samples:

Materials will only be accepted on the basis receipt of the enclosed Affidavit of Material Compliance. These materials will be accepted conditionally pending satisfactory results of the required test by the vendor.

The Authority reserves the right to reject any material not complying with the requirements set forth in this specification. If the material fails to comply with the requirements, it shall be removed and replaced by the vendor at no cost to the Authority.

Testing will be in accordance with AASHTO or ASTM methods of testing or in accordance with specified departmental test methods as described in section 6.3.

3.0 Payment

3.1 Scope of Payments:

The contractor shall receive and accept the compensation provided for in the contract as full payment for furnishing all labor, materials, tools, equipment and incidentals necessary to provide complete and acceptable quick setting patch materials: also, except where specifically provided elsewhere in the contract documents, for all risk, loss damage, or expense of whatever character arising out of the work or the prosecution thereof.

4.0 Material Specifications

4.1 Description:

4.1a. Concrete Mix (Hereinafter Designated as Type A and Type B)

The material shall consist of a mixture of cement, silica-free sand, **and aggregate** (maximum size 3/8"), and shall be ready for use in accordance with the manufacturer's instructions. It shall be concrete gray in color and contain no calcium chloride or an admixture containing calcium, chloride, or other ingredients in sufficient quantity to cause corrosion to steel reinforcement. It shall be quick-setting for use as a concrete patching compound where fast setting, rapid strength gain, non-shrink and high bond strength characteristics as needed.

The primary use for this material will be the patching of concrete bridge checks. This setting and strength gain properties must be such that the repaired area can be opened to traffic in two hours.

The designation of concrete mix, Type A, shall mean a product suitable for in ambient temperatures below 85 degrees F (29 c)

The designation of concrete mix, Type B, shall mean a product formulated for use in ambient temperatures ranging from 85 degrees F to 100 degrees F. (29C to 38C).

4.1b. Mortar Mixes (Hereinafter designated as type I, I-A, II, III, IV and V)

The materials shall be a complete mix of cement and silica-free sands (**containing no aggregates**) ready for mixing just prior to use in accordance with the manufacturer's instructions. It shall be concrete gray in color and contain no calcium chloride or an admixture containing calcium, chloride, or other ingredients in sufficient quantity to cause corrosion to steel reinforcement. It shall be quick-setting for use as a concrete patching compound where fast setting, rapid strength gain, non-shrink and high bond strength characteristics as needed. All mortars shall be capable of being placed from a minimum of 1 inch to 8 inch in depth.

The primary use for this material will be the patching of deteriorated concrete on piers and abutments (both above and below water), concrete curbs, sidewalks, etc.

The designation of mortar mix, type I, shall mean a product suitable for use above water.

The designation of mortar mix, Type I-A shall mean a product suitable for use above water. As much as fifteen (15) pounds of No. 8 course aggregate may be added to increase yield without adversely affecting the properties.

The designation of mortar mix, Type II, shall mean a product suitable for use under water.

The designation of mortar mix, Type III, shall mean a product suitable for use above water at temperature below 23 F (0 c).

The designation of mortar mix, Type IV, shall mean a product formulated for use above water and for use in hot weather (95 F, plus or minus 5 degrees).

The designation of mortar mix, Type V, shall mean a product formulated with between ten (10) to thirteen (13) percent by dry volume of an **approved catalyzed metallic enhancer** to resist the effect of drying shrinking for use above water.

If a particular product should be suitable for more than one application, the same material may be bid for more than one type.

4.2 Packaging Units

the material shall be packaged in 50 to 100 pound quantities such that one complete packaging unit shall produce a net yield (in place), after the final set of between 0.38 and 0.50 cubic feet of patch. For mortar mix Type I-A, this yield excludes the added aggregate. Should liquid activator (or other additives), other than water, adhesive, or bonding agents be integral to the performance of the patch material, they shall be provided so that one package of additive, activator, adhesive or bonding agent is required for one package of patch material.

4.3 Packaging:

The material shall be packaged in strong, moisture resistant, multi-wall paper bags or other suitable containers capable of withstanding shipping, normal handling and storage without breakage. The package shall protect the material from moisture and deterioration when stored indoors in unheated building for a period of one year. The activator, additive, adhesive and/or bonding agent package shall not be made of glass or other breakable material and shall be capable of withstanding shipping, normal handling and storage without breakage. The package shall protect its contents from moisture and deterioration and prevent evaporation for one year. The packaging shall be clearly marked with the name of the product and instructions for mixing and placing. Use or type of material shall be clearly printed on the bag or container. Instructions for use shall include but not be limited to the recommended amount of water or additive to be mixed with the patch material if necessary, the recommended mixing procedure, and sequence instructions for use of adhesive or bonding agent (if any) to bond fresh repair material to the concrete or mortar being repaired. Other information to be marked on the package: date the material was packaged, net yield after final set in cubic feet (or cubic meters) or in square feet per inch (or square meters per centimeter) thickness, and the net weight in each container. The yield and weight of the contents of each container shall not vary by more than 2% from the yield and weight stated in the making.

4.4 Shelf Life:

The material must have a shelf life when packaged as specified and stored indoors in an unheated building of at least one year after delivery.

4.5 Delivery:

The vendor shall deliver the material to the locations listed in subsections 1.8.2 and 1.8.3. The vendor shall be responsible for "tailgate" delivery and departmental personnel will assist in unloading.

Should material delivered under this contract require replacement because of failure to meet these specifications, all cost incurred for this shall be borne by the vendor. The rejected material shall be removed

from and replaced from replacement material. Departmental personnel will supervise but not assist in replacement of material.

All order of material will be placed as required by the Authority; all deliveries shall be made within fifteen (15) calendar days of the order. Orders will be placed (if and when) required in as reasonable quantities (e.g. truckload or balance to a specific location) as possible. Orders can be placed at any time during the duration of this contract based on capacity of storage facilities and rate of use. The vendor shall notify the Authority employees identified in subsections 1.8.2 and /or 1.8.3 as applicable three (3) or more working days in advance of a delivery. All costs incurred by the Authority resulting from the vendor's failure to deliver on the agreed date after said notice will be borne by the contractor in the form of deduction of the amount of these cost from payment for the material deliveries shall be made any day, excluding Saturdays, Sundays, and Holidays, after 8:00 A.M. and before the time required to complete unloading and storage at 3:00 P.M. All broken packages will be rejected.

4.6 Certification:

The vendor shall notify Mr. Robert Matthews of the Turnpike Maintenance Department 856-273-3227, when the material is ready for delivery and sampling. The Authority will then reserve the right to conduct sampling prior to delivery and at the vendor's location. The notarized affidavit of material compliance, as outlined in subsection 2.2, starting the material in its present formulation, which is to be delivered has been tested and is in compliance with these specifications, shall be provided at that time. The random sampling rate will be 4 bags/lot or 40,000 pounds. Each lot or batch will be labeled as they are sampled. Each shipment shall be accompanied by a delivery slip showing the quantity of material delivered. Any delivery which does not conform to these requirements may be refused and all additional cost incurred shall be borne by the vendor.

4.7 Mixing Requirements:

The preparation or the material must not require special tools, equipment or methods other than would be normal for the mixing and placement of concrete or mortar in small quantities. Each packaging unit must be mixable in its entirety at one time. The material must be non-toxic to the humans and not harmful to the environment. If safety equipment other than normal work clothes and gloves (i.e. special air filtering apparatus), is required during the mixing and placement of the material to protect the workmen from the material itself, the material will be rejected.

4.8 Prequalification:

The Authority will accept materials in its present formulation that will meet all specification and field test by the Maintenance Department (that have favorable results) for at least a year. Bidders not meeting this requirement have the option to submit specification and samples to the Authority for test and compliance with specifications for approval on future contracts.

4.9 Manifestly Faulty Materials

Manifestly faulty materials, based on field performance will be replaced by the vendor within two weeks of notification by the Authority. Any material deemed unacceptable, based on performance, will be tested for compliance with these specifications. If a material is not acceptable, after being replaced once, the vendor shall pick-up all unused material delivered under this contract. No payment will be made by the Authority for faulty material (used or unused) and the Authority may option for the next acceptable bidder.

5.0 Quantity and Payment:

The quantity for which payment is made will be actual number units as defined under packaging units for each item which were ordered and delivered in accordance with these specifications and to the locations and to the locations shown in the contract. Payment will be made at the unit price bid per unit for each item. This price shall be the total price for each unit delivered to the locations shown in the proposals. This shall include all additives, activators, bonding agents and /or adhesives required for the patch material. The total price for each type will be the sum of the products of the unit price items for each location.

6.0 Physical Requirements:

The material bib must meet the following specifications for permanent patching materials in accordance with the test procedures noted hereinafter.

6.1 Bond Strength:

Patching material must attain the following minimum compressive strengths when tested in accordance with section 6.3 B-1 of the standard test procedures.

For Concrete Mixes:

1 Day	2,000 PSI Minimum
28 DAY	5,000 PSI Minimum

For Mortar Mixes:

TYPE	1 DAY	7 DAY
Type I & I-A Mortar Mix	1000 PSI Minimum	2000 PSI Minimum
Type II Mortar Mix	1000 PSI Minimum	2000 PSI Minimum
Type III Mortar Mix	1000 PSI Minimum	2000 PSI Minimum
Type IV Mortar	1000 PSI Minimum	2000 PSI Minimum
Type V Mortar	500 PSI Minimum	500 PSI Minimum

6.2 Expansion – Shrinkage:

All concrete and mortar materials must conform to the following when tested in accordance with section 6.3 C of the standard test procedure.

METHOD	EXPANSION
Cured In Water	+ 0.20% MAX
Cured In Air	- 0.20% MAX
Difference	0.30% MAX

6.3 Durability

With the exception of Type V Mortar, all materials must retain at least 90% of the 28 day compressive strength after 50 freeze – thaw cycles. Type V mortar must retain at least 80% of the 28 day compressive strength after 300 freeze – thaw cycles.

6.4 Permeability:

The chloride content of the patching material must not exceed 2.5 lbs. per cubic yard at or below the 2" level of the test cylinder.

6.5 Compressive Strengths (PSI)

6.5.1. For Concrete Mixes

Concrete Mix	1 Hr. (PSI)	1 Day (PSI)	28 Day (PSI)
Type A @ 72 F	2000	4200	6300
Type A @ 36 F		4200	6300
Type B @ 95 F		6000	8000

6.5.2. For Mortar Mixes

Mortar Mix	2 Hr. (PSI)	1 Day (PSI)	7 Days (PSI)	28 Days (PSI)
Type I & I-A Mortar Mix	1000	3000	4000	4500
Type II Mortar Mix	n/a	2000	4000	4500
Type III Mortar Mix	1000	3000	4000	4500
Type IV Mortar	1000	3000	4000	4500
Type V Mortar	n/a	4000	6000	8000

6.6 Time of Set

Patching materials will be classified as follows after testing according to section 6.3 A-2 of the attached test procedure.

TYPE	NOT LESS THAN	NOT MORE THAN
Type A @ 72 F	10 Minutes	20 Minutes
Type B @ 95 F	10 Minutes	20 Minutes
Type I & I-A Mortar Mix	5 Minutes	n/a
Type II Mortar Mix	5 Minutes	20 Minutes
Type III Mortar Mix	5 Minutes	n/a
Type IV Mortar Mix	5 Minutes @ 90 F + 5 F	n/a
Type V Mortar Mix	5 Minutes	20 Minutes

7.0 Standard Test Procedure – Patching Materials

7.1 Preparation

All samples shall be prepared in accordance with the manufacturers recommendations, except that the consistency shall be 4-1/2" slump as per ASTM C-143. All mortar samples shall be prepared as per 105 plus or minus 5 flow and as per ASTM C-185 Par. 7.3.

7.2 Curing

All samples are to be room cured with a temperature range between 70.4 F and 76.4 F and with 50% relative humidity, except type IV which will be cured with temperature of 90 F plus or minus 5 F, and magnesium phosphate materials which shall be air cured.

7.3 Tests

Materials will be tested according to the following:

A. Time of Set

Run proctor according to ASTM C-403, except cardboard molds may be used.

B. Strength development

1. Two cubes per test in accordance with ASTM C-109 except, in the case of magnesium phosphate materials, the specimens will be air cured.
2. Bond – “Arizona shear method” prepare four 4” by 8” composite cylinders consisting of a base cylinder of hardened conventional concrete and an upper portion of patching material. The base concrete shall be made from 4” by 8” cylinders having a minimum compressive strength of 5000 PSI. These cylinders will be cut into equal halves along a 30 degree angle with the vertical axis. After being cut, the base cylinders will be etched with a 50 percent solution of hydrochloric acid and place in 4” by 8” cylinder molds with the cut face up. When preparing the composite cylinders, brush a small amount of the patching material into the saw-cut surface of the base cylinder and fill the remaining half of the cylinder mold with patching material using the standard consolidation procedures defined in AASHTO T-126. Remove the cylinders from the mold after 24 hours. Test two specimens at 1 day and two specimens at 7 days in accordance with the procedure listed in AASHTO T22.

C. Expansion – Shrinkage

Change the volume and length shall be monitored from batching until the material has reached equilibrium. Prepare for 2” x 2” x 10” autoclave bar test as per ASTM C157. Cure in room temperature between 70.4 F and 76.4 F with 50% relative humidity for 24 hours. Record the initial reading for the 24 hour test period then place two bars in a water bath in a moisture room and leave the other bars in the initial curing conditions. Take reading on each bar 24 hour intervals until stability has been attained. Type IV samples shall be cured at 90 F plus or minus 5F

D. Durability

Prepare four 4” x 8” cylinders for each material. Test two (2) cylinders according to ASTM C-192 for 28 days compressive strength the remaining two cylinders shall be tested as follows:

1. Cure for 24 hours in room at 70.4 F and 50 percent relative humidity, followed by 6 day cure in lime water solution.
2. Following the 7 day cure period, begin 50 cycle freeze – thaw test. Each cycle will consist of 16 hours freeze (air) and 8 hours thaw (solution). The solution will be proportion by weight of 96 percent water, 3.2 percent sodium chloride, and 0.8 percent calcium chloride.

3. At the end of the 50 cycles, perform compressive test and report the results as a percentage of the 28-day compressive strength result.

NOTE: After every tenth cycle, cylinders will be examined visually and their condition recorded in accordance with ASTM C672.

E. Permeability

1. Prepare one 4" x 8" cylinder and cure 24 hours at 70.4 F to 76.4 F and 50% relative humidity. Saw cut the cylinder into two 4" x 4" cylinders.
2. Scale all sides and the bottom with hot paraffin leaving the saw-cut surfaces exposed.
3. Place cylinders in durability solution for seven days.
4. Measure the amount of chlorides at the 1", 2" and 3" levels, from the top surface, in accordance with AASHTO T 260.

NOTE: If the material is to be used at temperatures lower than 70 F, the engineer may test the time of set and compressive strength at the lower temperature.

[illegible]

Date _____